

REMARKS/ARGUMENTS

Reconsideration of the application as amended is respectfully requested.

Status of Claims

Claims 1, 2, and 4-26 are pending in the application, with claim 1 being the only independent claim and claims 4-13 and 20-22 being withdrawn from consideration. Claims 1, 14, 16-19, and 23-26 have been amended. Claim 3 has been canceled, without prejudice.

Overview of the Office Action

Claims 1, 2, 14-19, 23 and 26 stand rejected under 35 U.S.C. 102(b) as anticipated by U.S. Patent No. 6,001,183 (*Gurary*).

Claims 14-19 stand rejected under 35 U.S.C. 103(a) as unpatentable over *Gurary* in view of U.S. Patent No. 6,494,955 (*Lei*).

Claims 24 and 25 stand rejected under 35 U.S.C. 103(a) as unpatentable over *Gurary* in view of U.S. Patent No. 6,063,203 (*Satoh*).

Summary of Subject Matter Disclosed in the Specification

The following descriptive details are based on the specification. They are provided only for the convenience of the Examiner as part of the discussion presented herein, and are not intended to argue limitations which are unclaimed.

The specification discloses a substrate holder (1) for a facility for epitaxial deposition of semiconductor material on a substrate (2). The substrate holder (1) includes a substrate supporting face, a holder rear face, which faces away from the substrate supporting face, and a

temperature equalization structure which results in a defined temperature profile over the entire substrate surface of the substrate (2). The substrate (2) is located on or in the vicinity of the substrate holder (1) during the epitaxial deposition. *See* Figs. 8A and 8B; and paragraphs [0010] and [0044] to [0045] of the published specification.

The temperature equalization structure comprises a stepped relief which is formed on the substrate supporting face of the substrate holder (1). *See* Figs. 8A and 8B; and paragraphs [0019] and [0044] to [0045] of the published specification.

Arguments

Independent Claim 1

35 U.S.C. 102(b) Rejection:

Applicants respectfully submit that claim 1, as amended, is not anticipated by *Gurary* because *Gurary* does not disclose, either expressly or inherently, each and every element as set forth in claim 1.

In particular, contrary to the Examiner's interpretation, *Gurary* does not teach or suggest that the temperature equalization structure comprises a stepped relief which is formed on the substrate supporting face of the substrate holder.

Gurary relates to a wafer carrier for use in an epitaxial growth process. *See* col. 1, lines 9-15 of *Gurary*. The Examiner refers to col. 13, lines 58-62 of *Gurary*, and contends that the wafer carrier (1100) of *Gurary* could have a stepped temperature equalization structure. However, *Gurary* does not anticipate amended claim 1, as explained below.

When discussing the embodiment shown in Fig. 15, *Gurary* further states that

“[a]s an alternative to having a smoothly curved profile, the bottom surface 1244 of depending member 1242 may include a multiplicity of steps...”

See col. 13, lines 20-22, 58-60 of *Gurary*.

As clearly shown in Fig. 15, the smoothly curved profile of *Gurary* is on the bottom surface (1244) of the depending member (1242). Thus, the stepped temperature equalization structure of *Gurary* suggested by the Examiner would be on the bottom surface (1244) of the depending member (1242) of the wafer carrier (1100). This bottom surface faces away from the wafer (140) and the wafer supporting face of the wafer carrier (1100). Thus, *Gurary* does not teach or suggest a temperature equalization structure comprising a stepped relief which is formed on a substrate supporting face of a substrate holder.

In sharp contrast, claim 1 of the present application specifically recites that “the temperature equalization structure comprises a stepped relief which is formed on the substrate supporting face of the substrate holder” (emphasis added).

In view of the foregoing, withdrawal of the 35 U.S.C. 102(b) rejection of claim 1 is respectfully requested.

35 U.S.C. 103(a) Rejection:

Applicants respectfully submit that amended claim 1 is patentable over *Gurary* in view of *Lei* because the combination of *Gurary* and *Lei* fails to teach or suggest all of the limitations of claim 1.

In particular, as discussed above, the temperature equalization structure of *Gurary* is on the bottom surface (1244) of the depending member (1242) of the wafer carrier (1100), which faces away from the wafer (140) and the wafer supporting face of the wafer carrier (1100)

Therefore, merely changing the smoothly curved profile of the temperature equalization structure of *Gurary* into a stepped one would not change the orientation of the temperature equalization structure of *Gurary* or result in a temperature equalization structure that “comprises a stepped relief which is formed on the substrate supporting face of the substrate holder”, as recited in claim 1.

In addition, it is noted that many factors, such as how the wafer (140) is supported on the wafer carrier (1100) and the total area of the wafer supporting face of the wafer carrier (1100) that comes in contact with the wafer (14) during operation, would affect the temperature profile of the wafer carrier (1100). Merely putting a stepped temperature equalization structure on the wafer supporting face of the wafer carrier (1100) of *Gurary* may destroy the pre-defined temperature profile of the wafer carrier (1100) and, therefore, render the wafer carrier (1100) inoperative for its intended purposes. Thus, there is no suggestion or motivation in *Gurary* for such a modification.

Moreover, as shown in Figs. 8A and 8B of the published specification, the phrase “stepped relief” recited in claim 1 denotes a configuration that includes a smaller structure (e.g., the small steps as shown in Fig. 8A) superposed upon a bigger structure (e.g., the “hill” in Fig. 8A). In contrast, the stepped surface 220 shown in Fig. 2A of *Lei* does not qualify as a “stepped relief” because it denotes a few relatively large steps, which are not superposed upon a bigger structure. Thus, the combination of *Gurary* and *Lei* fails to include a “stepped relief”, as recited in claim 1.

In view of the foregoing, claim 1 is clearly allowable over the combination of *Gurary* and *Lei* under 35 USC 103(a).

Dependent Claims 2, 14-19 and 23-26

Claims 2, 14-19 and 23-26 depend, either directly or indirectly, from independent claim 1 and, thus, each is allowable therewith.

In addition, these claims include features which serve to even more clearly distinguish the claimed invention over the prior art of record.

Conclusion

Based on all of the above, it is respectfully submitted that the present application is now in proper condition for allowance. Prompt and favorable action to this effect and early passing of this application to issue are respectfully solicited.

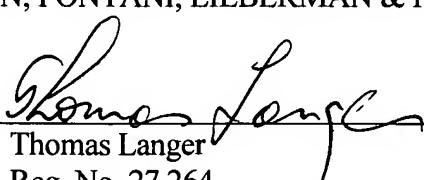
Should the Examiner have any comments, questions, suggestions or objections, the Examiner is respectfully requested to telephone the undersigned in order to facilitate reaching a resolution of any outstanding issues.

It is believed that no fees or charges are required at this time in connection with the application; however, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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Dated: June 15, 2006